CLAIMS

___ There are no amendments to the claims.

X A complete listing of all claims ever present in this case in ascending order with status identifier is presented in a separate section.

COMPLETE LISTING OF CLAIMS

IN ASCENDING ORDER WITH STATUS INDICATOR

1. (Currently Amended) A method of operating a distributed Bragg reflector laser device, said method comprising the steps of:

using a first feedback loop to ~~periodically~~ adjust a characteristic of said laser device in response to a sensed wavelength; and

using a second feedback loop to periodically adjust a current applied to said laser device in response to a sensed amplitude, and wherein said step of using said second feedback loop occurs during said step of using said first feedback loop.

C1

2. (Currently Amended) The method of claim 1, ~~further comprising the step of affecting the temperature of said laser device~~ wherein the characteristic adjusted in response to said sensed wavelength upon using said first feedback loop is the temperature of said laser device.

3. (Original) The method of claim 2, further comprising the step of using a third feedback loop to adjust a gain current applied to a gain section of said laser device.

4. (Original) The method of claim 3, further comprising the step of operating said third feedback loop in response to said amplitude.

5. (Original) The method of claim 4, wherein said step of using said third feedback loop occurs during said step of using said first feedback loop.

6. (Original) The method of claim 2, further comprising the step of using a third feedback loop to operate an amplifier associated with said laser device.

7. (Original) The method of claim 6, further comprising the step of operating said third feedback loop in response to the output power of said amplifier.

8. (Original) The method of claim 7, wherein said step of using said third feedback loop occurs during said step of using said second feedback loop.

C1 cont'd

9. (Original) The method of claim 2, further comprising the step of calculating transmission fraction data based on a reference power output and a filtered power output.

10. (Original) The method of claim 1, further comprising the step of using a backface loop to compensate for aging, said backface loop being operated based on signals from a backface monitor.

11. (Currently Amended) A method of starting-up a tunable light source, said method comprising the steps of:

ramping a tuning current applied to said tunable light source through a predetermined range of current levels within an operating mode;

generating a data curve representing the relationship between the applied tuning current and the amplitude of a signal output from said tunable light source;

storing said curve data in a first memory region;

providing look-up data in a second memory region, said look-up data being representative of mode-hopping values for said tunable light source;

with reference to said look-up data and said generated curve data, calculating a value representative of an optimal tuning current for said tunable light source; and

applying said optimal tuning current to said tunable light source.

12. (Original) The method of claim 11, further comprising the step of adjusting the temperature of said tunable light source, and wherein said step of applying said tuning current occurs during said step of adjusting the temperature of said tunable light source.

C' cont'd

13. (Currently Amended) The method of claim 12, further comprising the step of generating and storing curve data in ~~a~~ said first memory region corresponding to the relationship between the applied tuning current and the amplitude of a signal output from said tunable light source for a second operating mode.

14. (Currently Amended) The method of claim 13, further comprising the step of applying a second tuning current signal to said tunable light source based on said curve data for said second operating mode.

15. (Currently Amended) A method of ~~changing the wavelength channel of~~operating a laser device in a plurality of wavelength channels, said method comprising the steps of:

ramping a tuning current applied to said laser device through a predetermined range of current levels for a first wavelength;

generating and storing a data curve representing the relationship between the applied tuning current and the amplitude of a signal output from said tunable light source for said first wavelength;

ramping said tuning current applied to said laser device through a predetermined range of current levels for a second wavelength;

generating and storing a data curve representing the relationship between the applied tuning current and the amplitude of said signal output from said tunable light source for said second wavelength;

C1 cont'd

operating said laser device at ~~a~~ saidfirst wavelength; and

~~applying a tuning current to said laser device as a function of a second wavelength and mode hopping data stored in a memory~~ operating said laser device at said second wavelength,

wherein said second wavelength ~~being~~is different than said first wavelength.

16. (Currently Amended) The method of claim 15, wherein

said step of operating said laser device at said first wavelength comprises applying to said laser device said tuning current having a level determined based on said data curve for said first wavelength, and ~~includes the step of reading data from a memory~~

said step of operating said laser device at said second wavelength comprises applying to said laser device said tuning current having a level determined based on said data curve for said second wavelength.

17. (Original) The method of claim 15, further comprising the step of using a thermo-electric cooler to control the temperature of said laser device, and wherein said thermo-electric cooler is operated by a digital feedback loop.

18. (Original) The method of claim 15, further comprising the step of monitoring the amplitude developed at the backface of the laser device.

C' cont'd

19. (Currently Amended) A method of stabilizing a laser device, said method comprising the steps of:

adjusting a gain current applied to said laser device in response to signals output at the backface of said laser device to keep the power at the backface of said laser device at a constant level;

adjusting a tuning current applied to said laser device in response to output power of said laser device; and

simultaneously, adjusting a wavelength characteristic of said laser device in response to an optically filtered transmission fraction of said output power.

20. (Previously Amended) The method of claim 19, wherein said adjusting steps are performed by a programmed microprocessor.